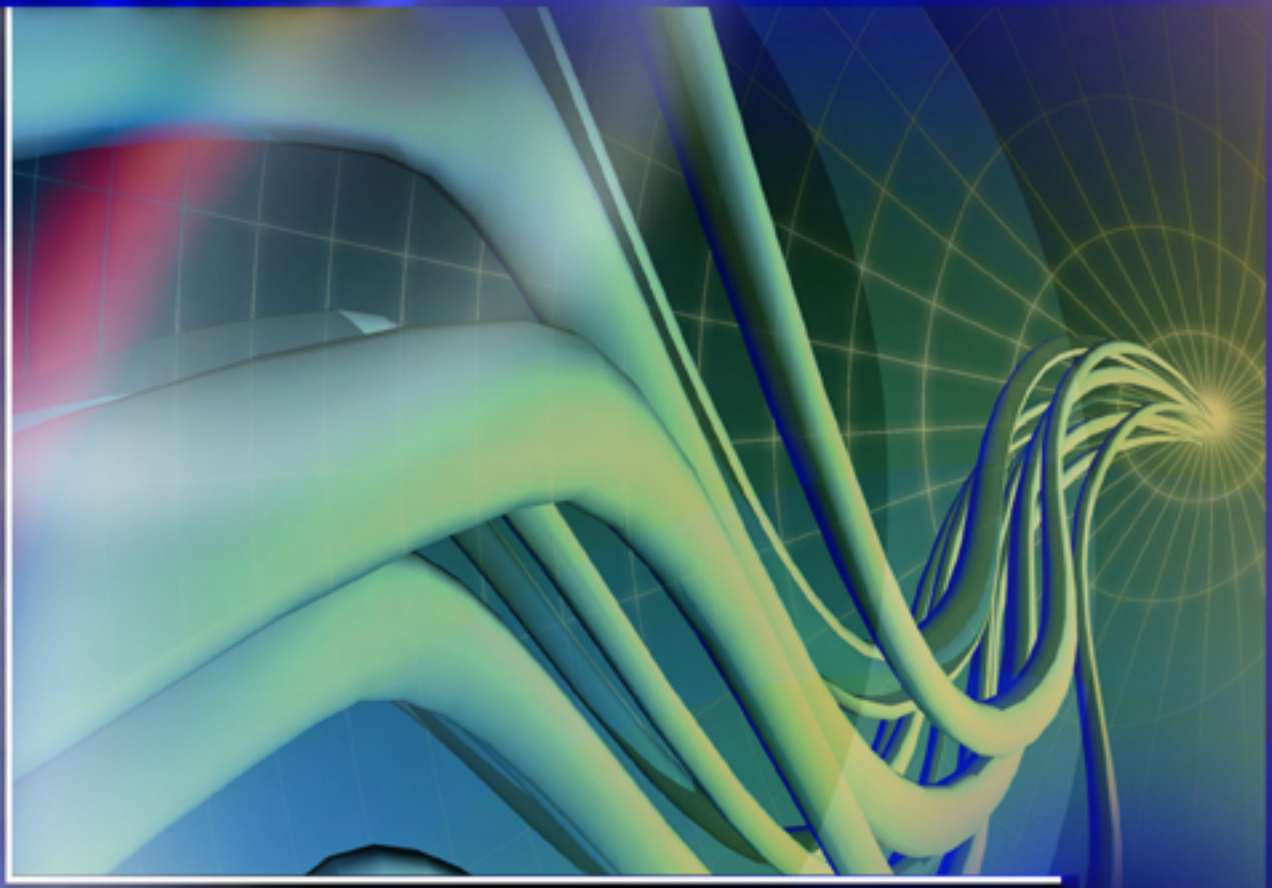
MASS™
Technical Guide



2009-2010
cycle

MLOCR
RVE
Encoding Station
Flat
Intelligent Mail® Barcode

UNITED STATES POSTAL SERVICE®

Table of Contents

Purpose **1**
Overview **1**
Certification Requirements **1**
Demo Machines 2
Recertification 2
Change of Ownership: End User 2
Change of Ownership: Manufacturer 2
Hardware and Software Revisions, Upgrades, and Patches **2**
Fee Schedules **3**
Annual Certification Fees 3
Fee Policy for New, Upgraded or Transferred Machines (After July 31st) Current Cycle 3
Fee Policy for New, Upgraded or Transferred Machines (Prior to July 31st) Current Cycle 4
The MASS Process **4**
ZIP + 4® Certification/LACSLink® Certification 4
Manufacturers 4
Hardware Manufacturers Certification 4
Remote Video Encoding/Local Video Encoding Manufacturer Certification 5
Intelligent Mail® Barcode Manufacturer and User Certification 5
User Certification 7
MASS Certification Processes **7**
Manufacturer Certification 7
User Certification 7
Ordering a MASS Test Deck **8**
MASS Certification Order Form **9**
Test Deck Specifications **11**
Test Deck Processing Procedures **11**
MLOCR Setup 12
MLOCR Test Deck Processing 12
Encoding Station Setup 13
Encoding Station Test Deck Processing 13
Shipping Instructions **14**
MASS Grading **14**
Grading for Standardization 14
Grading for Customer 3553 Information 15
Penalty for Misread/Miscodes 15
Penalty for Default Matches in Keying Environments 15
MERLIN® 15
Delivery Point Error Allowance 15
Perfect Address Error Allowance 16
Fatal Add-On Error 16
Appendix 1: PS Form 3553, CASS™ Summary Report **18**
Appendix 2: Test Mailpiece Examples **21**
Appendix 3: Translation of Error Codes and Special Flags **25**
Appendix 4: Sample MASS Certificate **30**
Appendix 5: Sample Customer No Match Report **32**
Customer No Match Report Reference Numbers 33
Appendix 6: Customer Statistics **36**
Appendix 7: Electronic Data File Description **39**

Purpose

MASS™ certification is a process designed for certification for Multiline Optical Character Readers (MLOCRs), Remote Video Encoding (RVE), Local Video Encoding (LVE), and encoding stations.

MASS/RVE is an extension of the CASS™ system. The MASS certification cycle is designed to evaluate the ability of MLOCRs and encoding stations to process address information and apply an accurate delivery point barcode (DPBC) to a mailpiece. However, the RVE is designed to evaluate the ability of the entire remote video encoding operation to process address information and apply an accurate DPBC to a mailpiece. The MASS/RVE certification cycle is comprised of the following phases:

1. Software manufacturer certification
2. Hardware manufacturer certification
3. RVE manufacturer certification
4. User certification

Overview

All MASS/RVE tests are similar to CASS Stage II tests in that the performance of address-matching software and barcode application hardware is evaluated after it has processed a test file. If the required accuracy is achieved, MASS or RVE certification is issued.

MASS/RVE certification is an annual requirement and remains valid from the certification date until the end of any current period (i.e., from August 1 of one year through July 31 of the next). Customers must reapply for certification and meet the accuracy requirements each year to remain certified and avoid interrupted service to their customers. MASS certification is mandatory for mailers using MLOCRs/RVE or encoding stations to print DPBCs on mailpieces submitted for mailing at discount automation rates (see *Domestic Mail Manual* (DMM) 708 Section 3.0).

MERLIN® verifies nine-digit ZIP Code information at the points of acceptance and has established zero tolerance for ZIP + 4 codes of ‘0000’ and ‘9999’. To maintain consistency, the return of ‘0000’ in the ZIP + 4 add-on, or the return of an **invalid** ‘9999’ in the ZIP+4 add-on, will continue to be a fatal add-on error for CASS/MASS certification and will require retesting.

Certification Requirements

Systems used for automation rates must be certified annually. The Certification Department understands that customers who purchase a new system often have legitimate reasons for wanting to operate it immediately: waiting for MASS™ certification is often impractical and costly. To address this issue, a 45-day courtesy certification period is provided for systems that are newly installed, moved, relocated, upgraded or reassembled. The customer must notify the Certification Department within seven days of the installation by completing and submitting the MASS order form with the installation date to be eligible for the 45-day courtesy. During this 45-day window, the customer can use the system to produce and

submit mail and qualify for automation rates after receiving clearance from the Certification Department. The customer must receive MASS certification during this 45-day period; if the customer fails to MASS certify within this 45-day period, the system becomes ineligible to submit mail at automation rates after the 45th day.

Demo Machines

Demonstration machines will require MASS certification and will be eligible for the 30-day courtesy. The MASS Department must be notified by customer and manufacturer within ten days of the final disposition of the machine.

Recertification

Recertification outside the normal annual testing periods may be required if changes are made to the following:

- the address-matching software utilized by the MLOCR
- the operating system (e.g. migrating from DOS to Windows NT) associated with the Address Recognition System and the Directory Retrieval System
- the camera configuration (e.g. from STD to RAF), including switching from a single to a dual camera configuration
- speed
- model

Change of Ownership: End User

If an MLOCR or an encoding station is sold or ownership is transferred, the new owner must notify the Certification Department in writing or email (cassman.ncsc@usps.gov). The notification must include the following:

- Equipment model number, serial number and MASS ID
- Previous owner's name and address
- New owner's name, address, phone number, and FAX number

If the machine is not physically relocated, a new MASS certificate may be issued. If the machine is physically relocated, the customer must follow the machine relocation guidelines. (See Certification Requirements above)

Change of Ownership: Manufacturer

All manufacturers who enter into a purchase agreement with a customer to enhance/upgrade a MLOCR machine (hybrid) currently being supported by another manufacturer must provide a Letter of Agreement signed by both parties to the MASS Department.

The MASS Department will not process any MASS requests for certification of machines containing a hybrid system unless the Letter of Agreement has been signed by both parties and is on file in the MASS Certification Department.

Hardware and Software Revisions, Upgrades, and Patches

If an MLOCR or encoding station software manufacturer issues a revision, upgrade, or patch to existing address-matching software or hardware, the manufacturer must submit written notification to the Certification Department before distributing the software or hardware. The written notification must include a brief description of the changes being made and the expected results of those

changes. The NCSC will evaluate the documentation and determine an appropriate course of action, which may include recertification of all users, a sample of the user base, hardware manufacturers only, or software manufacturers only. It is possible that no action will be taken following notification.

Fee Schedules

Annual Certification Fees

Fees for CASS and MASS certification were established to cover costs of developing and issuing testing material and administering the overall CASS and MASS program.

The fee schedule applies to MASS Certification Cycle M 2009-2010.

Fee-Based Certification	Aug/Oct (New Cycle)	NOV/ DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	After July 31, for Current Cycle
CASS	$200	$200	$200	$500	$500	$600	$700	$800	$900	$1,000
MASS MFG (MLOCR)		$500	$500	$500	$500	$500	$500	$500	$1,000	$1,500
MASS End-Users (MLOCR)									$1,000	$1,500
MASS MFG (Encoder)		$300	$300	$300	$300	$300	$300	$300	$750	$1,000
MASS End-Users (Encoder)									$750	$1,000

For CASS certification, customers will be billed based on the number of separate software configurations certified, not on the number of Stage II files ordered. In contrast, MASS customers will be billed for each test deck ordered regardless of the number of decks needed to achieve certification. Billing procedures are coordinated with our Accounts Receivable Department. Customers are billed as certification is awarded.

Fee Policy for New, Upgraded or Transferred Machines

(After July 31st) Current Cycle

All systems are required to be MASS certified by August 1 of each calender year. Systems will be charged half the regular scheduled fee when the applicant promptly notifies the MASS Department within seven days of the installation that a new, transferred or upgraded system has been received and installed. Notification is made by completing and submitting the MASS Order Form with the installation date.

Fee Policy for New, Upgraded or Transferred Machines
(Prior to July 31st) Current Cycle

New systems initially deployed from a MASS™ manufacturer to an end-user after July 31st will be charged a flat fee of $750 for Multiline Optical Character Readers (MLOCRs) and $500 for Encoding Stations. These fees also apply to any MLOCR or encoder transferred, upgraded or sold to one company. A new system is defined as barcoding equipment that is not in use or is not operational during the time for which certification is requested or during any previous MASS cycle. The applicant must promptly notify the MASS Department within seven days of the installation by completing and submitting the MASS Order Form with the installation date.

The MASS Process

ZIP + 4® Certification/ LACSLink® Certification

A ZIP + 4 can only be assigned when the primary number DPV confirms. The software can only make a ZIP + 4 match when the DPV confirmation code is Y, S, or D. ZIP + 4 certification will not allow software to return the +4 code from the ZIP + 4 file when the primary number and/or secondary number (when present) **does not** DPV confirm. When an address does not DPV confirm, the address-matching software can only return the 5-digit ZIP Code, Carrier Route, LACSLink return code, LACSLink indicator, DPV/DSF codes and footnotes, SuiteLink™ return code (if performing SuiteLink), and correct address components.

Manufacturers

1. Software providers must distribute current software to hardware manufacturers (see CASS Certification: http://ribbs.usps.gov/files/CASS/TECHNNICAL%5FGUIDES/CASSTECH.PDF)
2. Manufacturers must notify the Certification Department of the manufacturer's intent to become MASS certified by providing the model numbers and a list or matrix of the configurations under which their equipment is running.The matrix should include: model names, configuration, name of software, version number, serial number and manufacturer MASS identifier code that will be certified this MASS cycle.

Note: The configuration is a 3-character alphabetic identifier associated with the model and camera/reader type of the MLOCR, RVE, LVE and encoding stations. Configuraton 'STD' can be used when all MLOCR machines within the inventory use the same camera type or to represent one specific camera type. It is acceptible to use SD if the MASS manufacturer elects to use the model to identify the camera types.

Hardware Manufacturers Certification

1. Establish the Matrix (see above)
2. The hardware manufacturer orders a MASS test deck from the NCSC using the MASS Order Form.
3. The manufacturer processes the test deck on a representative model of the MLOCR or encoding station and returns it to the NCSC for evaluation.
4. The NCSC issues a MASS certificate (PDF file) and allows the manufacturer to distribute software to users after certification is achieved.
5. MASS manufacturers should notify the NCSC in writing when they are ready for us to release test decks to their customers.

Remote Video Encoding/Local Video Encoding Manufacturer Certification

If an MLOCR is used to capture mailpiece images or to apply DPBCs, the MLOCR must be MASS certified before RVE/LVE system certification can be attempted.

RVE System Certification With MLOCR

Deck 1 MLOCR should be tested and certified before attempting the RVE test.

Deck 2 RVE test deck is processed entirely to remote coding via Remote Character Recognition (RCR) or RVE/LVE. MLOCR coding must be deactivated during this part.

The RVE/LVE Order Form has been combined with the MASS Order Form in the Remote/Local Video encoding Site information and Equipment Information section. Complete only those sections that apply to your certification.

1. The manufacturer must order a separate test deck for each MLOCR or encoding station via the MASS Order Form. The manufacturer is not able to test until the updated software is received and installed. Existing networked machines can be tested in groups of four. Any new encoder must be tested as a standalone for the first year.
2. The manufacturer processes the test deck and returns it to the NCSC for evaluation.
3. When the manufacturer passes certification testing, the NCSC issues an electronic MASS certificate, which may be printed by the customer. Upon receipt of the electronic certificate, the user may begin processing mail with the new software to obtain automation discounts.

***Note**: Successful scores are required on all test decks to attain RVE system Certification.*

Intelligent Mail® Barcode Manufacturer and User Certification

MASS certification offer an Intelligent Mail Barcode test.

As the next generation of USPS barcode technology, the Intelligent Mail Barcode is used to sort and track letters and flats. It combines the capabilities of the POSTNET barcode and the PLANET Code® barcode into one unique barcode. The Intelligent Mail Barcode is a height-modulated barcode using four different vertical bar types.

Visit the RIBBS website at http://ribbs.usps.gov/onecodesolution for additional information on the Intelligent Mail Barcode.

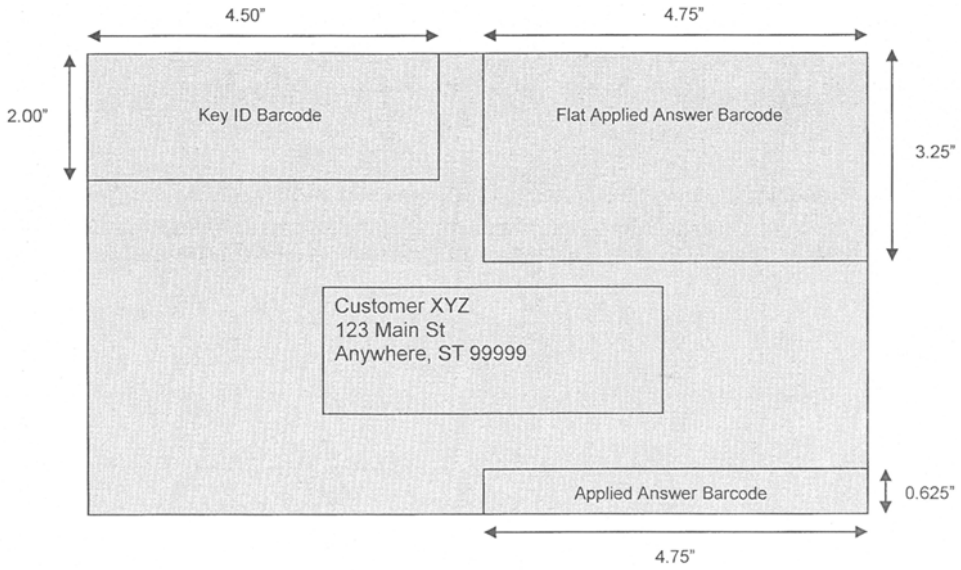
Intelligent Mail Barcode certification follows the same process as hardware manufacturer certification.The hardware is tested to determine if it can 1) correctly read the address block on a test mailpiece; 2) process the address information through address-matching software, and; 3) spray a machine-readable, accurate Intelligent Mail Barcode on the test mailpiece using software that has already been CASS Certified.

For testing, the **Barcode ID** should be set to “00” (as instructed in the Spec and Resource Guide when OEL is not used). The **Service Code** should be set to “700” for First-Class Mail® (as instructed in the Spec and Resource Guide when no services are requested). **Mailer ID** can be either a 6- or 9-digit number, but may not be all zeroes (MID required per *DMM*®). The Mailer ID can be a predefined Mailer ID or either 666666 or 999999999 as long as only one Mailer ID is used for all IM™ barcodes sprayed on the test mailpieces. The **Serial Number** value can either be a 6- or 9-digit number as long as they are not all zeroes. Either a single Serial Number can be used on all mailpieces or a different one for every mailpiece. If any two of the test deck mailpieces have the same Serial Number, then every mailpiece in the test deck must have the same Serial Number.

For MASS testing, the Certification Department will follow the “Top Choice Barcode Priority.” The top choice barcode is defined by the current USPS guidelines for DPBC as the physically lowest and longest decodable barcode in a particular type (PLANET, POSTNET, Intelligent Mail Barcode). For example, if an Intelligent Mail Barcode exists in the address block and a second Intelligent Mail Barcode exists in the barcode clear zone, the Intelligent Mail Barcode in the clear zone will be read as the barcode answer because it is physically lower on the mailpiece.

For Flat testing, the barcode answer can be returned above the address block, within an area 4.75 inches from the right edge and 3.25 inches from the top of the mailpiece, or in the barcode clear zone.

- The **USPS *Key ID Barcode*** read zone is referenced from the top left corner of the mailpiece.
- The ***Applied Answer Barcode*** read zone is referenced from the lower right corner of the mailpiece.
- The ***Flats Applied Answer Barcode*** read zone is referenced from the top right corner of the malpiece (activated by the “Flats” option on Transport Control). This will be an additional read zone to the current Applied Answer Barcode.



User Certification

1. The user must order a separate test deck for each MLOCR or encoding station via the MASS Order Form. The user is not able to test until the updated software is received and installed. Existing networked machines can be tested in groups of four. Any new encoder must be tested as a standalone for the first year.
2. The user processes the test deck and returns it to the NCSC for evaluation.
3. When the user passes certification testing, the NCSC issues an electronic MASS certificate which may be printed by the customer. Upon receipt of the electronic certification, the user may begin processing mail with the new software to obtain automation discounts.

MASS Certification Processes

The NCSC sends a letter and a Terms and Conditions document to all MASS customers announcing the beginning of the manufacturer and end user certification period. The Terms and Conditions document ensures that the customer understands the requirements of the MASS programs. It must be signed and returned to the Certification Department. Letters and documents are sent to customers who were MASS certified during the previous cycle, and to all postal managers of customer service support at the area and district levels. The MASS Technical Guide is posted on RIBBS at http://ribbs.usps.gov/files/cass/TECHNICAL%5FGUIDES/MASSTECH.pdf.

Manufacturer Certification

MLOCR, RVE, LVE, and encoding station manufacturers are first to receive updated software and must achieve MASS certification before distributing software to end users.

User Certification

All encoding stations, RVE, LVE, and MLOCR manufacturers and users must submit a completed MASS Certification Order Form to the Certification Department.

The Certification Department will verify and process the information on the order form. Each test deck is assigned a unique customer tracking number specific to the equipment serial number. (See “Test Deck Specifications”) Production of a MASS test deck normally requires three working days; however, during peak fulfillment periods, it may require as many as 10 working days. The NCSC recommends that customers order tests as soon as they receive updated software from their manufacturer. Orders are processed in the order in which they are received.

All test decks are trayed and placed in corrugated cardboard boxes. The customer tracking number is attached to a document on the top of each tray and printed on the label on each box. Also included on at least one of the trays is a computer printout that identifies the company name, machine manufacturer, model number, and serial number. The customer must verify this information before running the test deck.

Note: ***No U.S. Postal Service representative is required to open and process a test deck.***

After processing, users must return test decks to the Certification Department. Test decks returned by other commercial carriers will be rejected.

The NCSC receives, evaluates, and grades processed test decks and will make results available to the customer within ten working days.

Note: All tests are processed in the order in which they are received.

The NCSC sends an electronic certificate (pdf file) to all users who meet current certification requirements. Users who fail to certify will receive a copy of their error report and another test deck for all machines that failed a certification attempt.

Ordering a MASS Test Deck

To ensure the customer understands the requirements of the MASS program, the Terms and Conditions document must be completed by all customers. The document must be signed and returned to the Certification Department. It can be faxed or mailed along with the MASS Order Form. The Certification Department will not process a MASS Order Form request unless the Terms and Conditions document is on file.

The MASS and Remote/Local Video Encoding order forms have been combined for your convenience. You can now request the MLOCR, RVE and LVE tests from the same order form.

To order a MASS certification test deck, complete the MASS order form.

Customers are responsible for ordering test decks. One test deck is required for each machine to be certified. The NCSC automatically sends a test deck for any machine that fails to certify. Networked machines require one order per four stations.

UNITED STATES POSTAL SERVICE

MASS™ Order Form

Customer Information *(Please print)*

Company Official Contact Name	Email Address
Company Name	
Street Address, P.O. Box, Rural/Hwy Contract, or Route Number ❑ New Facility	Apt/Suite
City / State	ZIP + 4® Code
Telephone Number *(Include area code)*	Fax Number *(Include area code)*
Company Salesperson / Telephone Number *(Include area code)*	Salesperson Email Address

Billing Address *(If different from Customer Information)*

Street Address, P.O. Box, Rural/Hwy Contract, or Route Number ❑ Moved ❑ New Facility	Apt/Suite
City / State	ZIP + 4

U.S. Postal Service® Representative Information

Attention	
Street Address, P.O. Box, Rural/Hwy Contract, or Route Number	Apt/Suite
City / State	ZIP + 4
Telephone Number *(Include area code)*	Fax Number *(Include area code)*

Equipment Information

I request that my certification be maintained in U.S. Postal Service® documents and records as:

❑ Service Bureau ❑ Mailer ❑ Manufacturer

❑ I do not wish to be listed in USPS pubs.

All MLOCR machines connected to a *FASTforward*® black box or UMove box MUST process the MASS test deck with *FASTforward* or UMove mode turned on. Check here if a *FASTforward* black box or UMove box is installed and this machine is operating with *FASTforward or UMove* turned on. ❑ *FASTforward* ❑ *UMove*

Is this machine capable of printing a LACS^Link®^ converted address? ❑ yes ❑ no

You **MUST** return a hardcopy of PS Form 3553, *CASS™ Summary Report*, with the MASS test deck.

User Acknowledgement Statement

I hereby certify that all information on this application is accurate and correct. I also certify that the responses provided on the MASS certification test deck will be obtained using the same configuration as used in the processing of customer/client address files and that any modification to the products used to process this test will require retesting and recertification prior to use or release. The MASS test deck will be processed in-house with company-owned or leased software/hardware. I further certify that this address-matching product contains technology that disables access to outdated U.S. Postal Service data as stated in the *DMM*® 708.3.

CASS/MASS certification scores are confidential information and the applicant agrees not to disclose scores achieved on their passing test for the purpose of marketing their software or hardware product.

Company Official Contact Signature	Date

Return Order Form To	NCSC Use Only
MASS DEPARTMENT NATIONAL CUSTOMER SUPPORT CENTER UNITED STATES POSTAL SERVICE 6060 PRIMACY PKWY STE 101 MEMPHIS TN 38188-0001 Fax: 901-681-4440	Customer Number Date PRDT Code

Note: This page may be copied for multiple MLOCR systems. A completed form must be submitted for each MLOCR system.

Type of Certification

Indicate the type of certification requested.

☐ Annual Certification ☐ New Certification ☐ Moved/Relocated ☐ Upgraded
☐ Reassembled ☐ Demonstration ☐ Hybrid/Conversion

Installation date *(Not required for annual certification.)*

Type of MASS™ Test

Indicate the type of MASS test requested.

☐ MLOCR ☐ MLOCR with RVE ☐ Encoder ☐ RVE ☐ LVE ☐ Flat ☐ Intelligent Mail® Barcode

MLOCR

Software Product	Version Number	Configuration	MASS ID
Equipment Manufacturer	Model Number	Serial Number	

Encoding Stations

Software Product	Version Number	Configuration	MASS ID
Equipment Manufacturer	Model Number	Serial Number*	

** List all serial numbers for networked systems and indicate which one is the server (4 stations for test deck).*

Remote/Local Video encoding Site Information

Company Official Name

Street Address, P.O. Box, Rural/Hwy Contract, or Route Number	Apt/Suite

City	State	ZIP + 4® Code

Telephone Number *(Include area code)*	Fax Number *(Include area code)*

Software	Version	Configuration

Equipment Information

Image Capturing Equipment Manufacturer	Model Number	Serial Number	MASS ID
Barcoding Equipment Manufacturer	Model Number	Serial Number	MASS ID

MASS Certification Date *(If applicable)*

Hybrid Equipment Information Before Conversion

Equipment Manufacturer	Model Number	Serial Number

Change of Ownership

Equipment Model Number	Serial Number	MASS ID

Previous Owner's Name

Previous Owner's Address

If the machine is not physically relocated, a new MASS certificate may be issued. If the machine is physically relocated, the customer must follow the machine relocation guidelines.

Test Deck Specifications

MASS™ test decks are designed to exercise MLOCR/RVE/LVE and encoding station address-matching software look-up capabilities emulating the CASS™ Stage files. The input addresses represent the same type and approximate mix of questions in the CASS Stage files.

All MLOCR test decks will contain 2,000 test mailpieces, while all encoding station tests contain 350.

The test deck used to complete RVE system certification are printed in two fonts; half of the deck is printed in a Gothic text and half in a cursive script font designed to be rejected from MLOCR processing.

Each test mailpiece consists of one piece of 8 1/2 x 11 inch white, 20 pound paper folded and inserted into a 24-pound, white-wove, 5 3/4 x 9 inches window envelope. The envelope has two windows – one upper and one lower. The upper window measures 1 1/4 x 4 inches and is located 3/8 inch from the left edge and 3 11/16 inches from the bottom edge. The bottom window measures 1 3/8 x 4 1/2 inches and is located 2 1/16 inches from the left edge and 11/16 inch from the bottom edge.

Data elements internal to the Postal Service are printed on the insert and appear in the upper window. These elements identify the specific deck to which any test mailpiece belongs, the customer tracking number, and the exact question key number appearing on that mailpiece. The test address appears in the lower window.

RVE test decks are designed to exercise all portions of the RVE systems address-matching software look-up capabilities by emulating the CASS Stage II files. The addresses printed on the test mailpieces represent the same types of addressing anomalies found in the CASS Stage II test. Although the actual address represented on the test mailpiece may differ from one test deck to another, the type and number of anomalies are similar.

Test Deck Processing Procedures

All MASS™ certification tests must be conducted in a “normal operations” state, meaning that the system must be configured as it would be when it is used to produce mail for automation discounts.

For systems that are *FASTforward*® equipped, the *FASTforward* interface must be operational because the MASS test deck may include addresses that are forwardable. If processing does not forward any of the forwardable pieces, the graders will assume that the *FASTforward* system was not operational, and the test will be invalid. If at least one forwardable mailpiece appears to have been produced by the *FASTforward* interface, the test deck will be considered valid and submitted for grading. MASS grading will not evaluate the accuracy of the *FASTforward* answers, only the fact that the interface was functioning. Any answer on forwardable mailpieces that are not assigned a new address will be graded based on the accuracy of the response to the input question.

Note: ***Where a MASS-certified system would normally spray a 5-digit ZIP Code on a production mailpiece, it must also spray a 5-digit ZIP Code on the MASS test mailpiece.***

MLOCR Setup

The actual processing for a MASS test deck varies between manufacturers of MLOCR equipment and model types; therefore, these guidelines are general. To achieve optimum results from a MASS certification attempt, consult the equipment manufacturer regarding all processing-related issues.

Clean the equipment according to the manufacturer's instructions. Pay particular attention to the optics, and run the manufacturer's diagnostic routine to optimize the character-recognition software. Run several pieces with the barcode turned off to verify the setup and ensure that the address block is reading properly.

Because the NCSC processes each test deck on a barcode reader, the quality of the barcode returned on the test mailpieces is important. If more than 2.5 percent of the mailpieces generated contain unreadable barcodes, these mailpieces will be rejected, which will decrease the chance of certification.

Ensure the MLOCR has been prepared according to the manufacturer's instructions regarding sort schemes, pick-off settings, vacuum system and belt speed adjustments.

There is a 1% tolerance on the 3553 counts where total ZIP+4/DPV® confirmed records must not exceed total records coded in the customer's test. This requirement will be enforced. End-users must verify that rejected mailpieces are run in reject mode.

It is the End-user's responsibility to ensure the CASS Summary Report (PS Form 3553) reflects the revised version number for the 2009-2010 cycle. Any other version number on the PS Form 3553 will render the test invalid.

Note: ***MLOCR/RVE/LVE certifications must be attempted by the end user. No one besides the end users or his/her employee(s) may complete an MLOCR/RVE/LVE system test. If it is determined that unauthorzed individuals completed the MLOCR/RVE/LVE test, the test deck will be disqualified.***

MLOCR Test Deck Processing

Verify that the test deck corresponds to the machine manufacturer's model and serial number. This information is listed in the computer-generated documents provided with the test deck.

Process each test deck in a manner that ensures every test mailpiece that should receive a DPBC is coded. Be aware that by design not all test mailpieces can be coded, and some input addresses should not be coded. After processing the entire test deck, all rejects may be reprocessed. **If bad barcodes are sprayed, up to 100 pieces can be over labeled.** After completely processing the test deck, create a computer-generated facsimile of the PS Form 3553, CASS™ Summary Report, and return it with the test deck to the NCSC for evaluation. **All appropriate fields must be completed in PS Form 3553.**

The MASS Department will compare and analyze the hardcopy PS Form 3553 against the answer field information returned in the test deck. Computation of PS

Form 3553 values must be based on the answers returned during the matching process—never from input fields. In normal operations, if a user chooses to overwrite input fields with output information, production of the PS Form 3553 must be able to discern between processed and unprocessed records. If any errors are identified in the comparison, the grading process will continue; however, certification cannot be issued until a valid PS Form 3553 is submitted to the MASS Department.

Note: ***A U.S. Postal Service® representative is no longer required to witness the test. The customer must sign and date the PS Form 3553 and attach one of the rejected test mailpieces to the form. PS Form 3553 must comply with the requirements outlined in the most current DMM and must represent the test deck processed.***

Encoding Station Setup

The processing of mail on a MASS™ test deck varies between manufacturers of encoding station equipment and model types. To achieve optimum results, consult the equipment manufacturer regarding all processing-related issues.

Verify that the encoding station is in proper operating order before processing a MASS test. The NCSC processes each test deck on a barcode reader—its quality is vital. If more than 2.5 percent of the mailpieces generated contain unreadable barcodes, all mailpieces with unreadable barcodes will be rejected, decreasing the possibility of certification. After processing the entire test deck, all rejects may be reprocessed. **If bad barcodes are sprayed, up to 50 pieces can be over labeled.**

Note: *Encoding station certification must be attempted by the end user: no one besides the end users or his/her employee(s) may complete an encoding system test. If it is determined that unauthorized individuals completed the encoding system test, the test deck will be disqualified.*

Encoding Station Test Deck Processing

Before beginning the MASS test, the encoding station operator should be properly trained by the equipment manufacturer or the equipment owner. For any operational or processing issues, consult the equipment manufacturer.

Mailpieces for networked systems should be equally separated and processed on each machine during the test. One PS Form 3553 should be created for each group of networked machines. Existing networked machines may be tested in groups of four.

Process each test deck in a manner that ensures every test mailpiece that should receive a DPBC is coded. Be aware that by design not all test mailpieces can be coded, and some input addresses should not be coded. After completely processing the test deck, create a computer-generated facsimile of PS Form 3553 and return it along with the test deck to the NCSC for evaluation. **All appropriate fields must be completed in PS Form 3553.**

There is a 1% tolerance on the 3553 counts where total ZIP+4/DPV confirmed records must not exceed total records coded in the customer's test. This requirement will be enforced. End-users must verify that rejected mailpieces are run in reject mode.

It is the End-user's responsibility to ensure the CASS Summary Report (PS Form 3553) reflects the revised version number for the 2009-20108 cycle. Any other version number on the PS Form 3553 will render the test invalid.

Note: ***A U.S. Postal Service® representative is no longer required to witness the test. The customer must sign and date the PS Form 3553 and attach one of the rejected test mailpieces to the form. PS Form 3553 must comply with the requirements outlined in the most current DMM and must represent the test deck processed.***

You must return the entire test deck, including all rejected, damaged, and non-coded mailpieces.

Shipping Instructions

The National Customer Support Center (NCSC) in Memphis, Tennessee, sends all test decks to customer sites. Return shipment of a completed test deck is the customer's responsibility.

Please return completed test decks to the following address:

MASS CERTIFICATION
NATIONAL CUSTOMER SUPPORT CENTER
UNITED STATES POSTAL SERVICE
6060 PRIMACY PKWY STE 101
MEMPHIS TN 38188-0001

Note: Test decks returned by other commercial carriers will be rejected.

MASS Grading

A passing score of 98.5% must be achieved and the following requirements must be met on all test decks to attain MASS certification.

1. Can not exceed the maximum allowed for incorrectly coded Perfect Address
2. Can not code to a Fatal Addon (not allowed)
3. Can not exceed the maximum allowed for incorrectly coded DPBC
4. Can not exceed the 1% tolernace on the 3553 counts
5. CASS Summary Report (PS Form 3553) must be complete and accurate
6. DPV False Positives seed records must be reported to DSF2STOP@USPS.GOV.

After passing certification testing, the NCSC issues an electronic MASS certificate (PDF file) and companies are listed in the USPS publications, if requested.

Grading for Standardization

The CASS test for hardware manufacturers will continue to grade for address standardization to verify that software does not lose or modify critical address elements. This issue is especially critical in *FASTforward®* equipped MLOCRs.

Grading for Customer 3553 Information

There is a 1% tolerance on the 3553 counts where total ZIP+4/DPV confirmed records must not exceed total records coded in the customer's test. This requirement will be enforced for Cycle L. End-users must verify that rejected mailpieces are run in reject mode.

It is the End-user's responsibility to ensure the CASS Summary Report (PS Form 3553) reflects the revised version number. Any other version number on the PS Form 3553 will render the test invalid.

Note: ***MLOCR/RVE/LVE certifications must be attempted by the end user. No one besides the end users or his/her employee(s) may complete an MLOCR/RVE/LVE system test. If it is determined that unauthorzed individuals completed the MLOCR/RVE/LVE test, the test deck will be disqualified.***

Penalty for Misread/ Miscodes

In an attempt to reduce the number of miscodes caused by variances in optical character recognition systems, the penalty for misreads/miscodes is 1.5 percent, and the allowance for rejects is 7.5 percent. A misread/miscode is defined as an inaccurate barcode applied to the test piece caused by an erroneous interpretation of the primary address number (i.e. 100 Main St is incorrectly read as 10 Main St). Accurate character recognition is a critical factor in successfully obtaining MASS certification.

Character recognition systems are challenged to improve their capabilities to accurately discern characters, and to not spray barcodes when clearly ambiguous conditions are present. MASS is relaxing the number of pieces required to be coded to facilitate this approach.

Penalty for Default Matches in Keying Environments

MASS™ will assess penalties for default matches in keying environments only. Depth of code is an issue when an operator fails to key the entire address, particularly when the secondary address information is excluded. The penalty will be doubled for each depth of code error.

MERLIN®

The MERLIN system is used to grade MASS™ test decks that exceed the 2.5 percent unreadable barcode allowance. When more than 2.5 percent of the returned test deck's mailpieces contain an unreadable barcode, all mailpieces with an unreadable barcode will be checked on the MERLIN system. If the system reports that a barcode is unreadable, the mailpiece will be graded as an automatic failure. If the system reports that the barcode is readable, the mailpiece will be manually graded and scored.

To assist MASS users in evaluating MERLIN performance, the Certification Department will offer a free, 100 piece test deck for system evaluation. The test deck can be graded on a MERLIN system by the Certification Department. The free MERLIN evaluation will not affect existing MASS certification status.

Delivery Point Error Allowance

A delivery point error is assessed only if the ZIP Code and add-on are correct but the delivery point values are incorrect. The delivery point error allowance is 0.5 percent of the total number of mailpieces available for grading.

Perfect Address Error Allowance

Perfect Addresses are defined as having 100 percent accurate content and format, fully spelled-out or abbreviated. Only valid perfect addresses are included in the testing, and a score of 100 percent correct coding is required. Perfect addresses are pure and may not contain aliases, alternates, or highrise default alternate addresses. In addition, MASS will only include perfect addresses in which no other address record on the database affects or influences the outcome of the match.

Fatal Add-On Error

The return of '0000' in the ZIP + 4 add-on, or the return of an **invalid** '9999' in the ZIP + 4 add-on, will continue to be a fatal add-on error for CASS/MASS certification and will require retesting.

Each test deck received at the NCSC is scanned by a barcode reader. A customer grading file is created and uploaded to the mainframe, where it is processed against the current MASS™ grading scheme outlined later in this section (see "Appendix 3: Translation of Errors Codes and Special Flags"). The NCSC grades the test, generates a grading report, and mails a copy of the report to the customer. A certificate is mailed when the customer achieves certification (see "Appendix 4: Sample MASS Certificate").

Grading is based on the barcode sprayed by the MLOCR onto the test mailpiece and is deemed either correct or incorrect. If no answer is the correct answer, then the correct answer is blank (or spaces). In situations where the input causes a multiple-response condition and all candidate records share the same 5-digit ZIP Code, the vendor may elect to apply a 5-digit barcode or leave spaces on the test piece.

There are several types of records to consider when grading:

1. Must answer (i.e., special flag A5). These records must be barcoded correctly. If the record is barcoded incorrectly or left blank, it is added to the total number of incorrectly barcoded records.
2. Optional answer (i.e., special flag A9, where no answer is bypassed). It is not mandatory to code these records. If the records are barcoded correctly, they are added to the total number of correctly barcoded records. If they are not barcoded correctly (left blank), they are not added to the total number of correctly or incorrectly barcoded records. Optional answer categories are identified by the single asterisk on the "Customer No Match Translation of Error Codes $ Special Flags" in Appendix 3.
3. Must not answer (i.e., special flag KO, where no answer is the only correct answer unless using DPV as tiebreaker). If these records are barcoded (not left blank), they are added to the number of incorrectly barcoded records. Must Return input records are identified by the double asterisk on the "Customer No Match Translation of Error Codes & Special Flags" (Appendix 3). DPV enabled software may elect to code where input address ambiguities (i.e., missing suffixes, misspelled street name, etc.) and data anomalies exist wthin the ZIP + 4 file.
4. Grading for mail standardization records may or may not contain an input ZIP Code, may have a misspelled city name, and may contain a nonmailing name. The address also may contain a numeric street name, misspelled street name, or street names that could possibly contain a pre- or post-directional. Address-

matching software must be able to correctly match the input address with the appropriate carrier rout, 5-digit or ZIP + 4 record and return a properly standardized answer along with the ZIP Code, +4 add-on code, delivery point code, and the check digit if it DPV confirms. CASS accepts and grades the answer as correct in the standard abbreviated format, completely spelled out, exactly as presented in the USPS AIS product or the input record for non-matched records. These categories are identified by the three asterisks on the "Customer No Match Translation of Error Codes & Special Flags" in Appendix 3.

5. Normalization is required for subcategory MA. Some PO Box, Rural Route and Highway Contract input addresses often appear on a mailing list with the following words and must be converted as shown: This category is identified by the four asterisks on the "Customer No Match Translation of Error Codes & Special Flags" in Appendix 3.

INPUT	OUTPUT
Drawer 10	PO Box 10
Drawer A	PO Box A
Caller 10	PO Box 10
Lockbox 10	PO Box 10
Firm Caller A	PO Box A
Bin A	PO Box A
Rural Route 1	RR 1
FDR Route 1	RR 1
Star Route 1	HC 1
Highway Contract 1	HC 1

	Answer = NCSC Answer	Answer = Other Answer
Must Answer	Add 1 to correct count	Add 1 to incorrect count
Optional Answer	Add 1 to correct count	Add 1 to incorrect count
Must Not Answer	Add 1 to correct count	Add 1 to incorrect count

$$\frac{\text{Correct}}{\text{Correct + Incorrect}} = \%$$

Note: ***The score required to achieve certification for MLOCRs, RVE, LVE, and encoding stations is 98.5 percent or higher.***

Appendix 1:
PS Form 3553,
CASS™ Summary Report

UNITED STATES POSTAL SERVICE

CASS™ Summary Report

This form may be generated as the output of address matching processing using CASS Certified™ software in conjunction with current USPS® address database files. Any facsimile must contain the same information in the same format as the printed form.

See DMM® Section 708 *for more information.*

A. Software

CASS A1	1. CASS Certified Company Name	2. CASS Certified Software Name & Version	3. Configuration
	4. Z4Change Certified Company Name	5. Z4Change Certified Software Name & Version	6. Configuration
	7. DirectDPV™ Certified Company Name	8. DirectDPV Certified Software Name & Version	9. Configuration
	10. eLOT® Certified Company Name	11. eLOT Certified Software Name & Version	12. Configuration
MASS A2	1. MASS™ Certified Company Name	2. MASS Certified Software Name, Version & Model No.	3. Configuration
			4. MLOCR Serial No.

B. List

1. List Processor's Name	2. Date List Processed	3. Date of Database Product Used
	a. Master File	a. ZIP + 4® File
	b. Z4Change	b. Z4Change
	c. DirectDPV	c. DirectDPV
	d. eLOT	d. eLOT
	e. CRIS	e. CRIS
4. List Name or ID No. (*If using ID No., number must start with ID #*)	5. Number of Lists	6. Total Records Submitted for Processing

C. Output

Output Rating	1. Total Coded	2. Validation Period	Output Rating	1. Total Coded	2. Validation Period
a. ZIP + 4/DPV Confirmed ▶		From To	d. 5-Digit Coded ▶		From To
b. Z4Change Processed ▶			e. CRRT Coded ▶		From To
c. DirectDPV ▶		From To	f. eLOT Assigned ▶		From To

D. Mailer

I certify that the mailing submitted with this form has been coded *(as indicated above)* using CASS Certified software meeting all of the requirements listed in the *DMM* Section 708.

1. Mailer's Signature	2. Date Signed

3. Name and Address of Mailer

E. Qualitative Statistical Summary (QSS)

For informational Purposes Only: QSS is solely made available for the list processor's review and analysis. This information is not to be considered by the U.S. Postal Service® personnel in determining rate eligibility under any circumstances. See reverse for a detailed explanation.

High Rise Default	High Rise Exact	RR Default	RR Exact	LACSLink®	EWS	SuiteLink™

Privacy Notice: For information regarding our Privacy Policy, visit USPS.COM®.

Instructions

A. Software

A1.1, 1.4, 1.7, & A2.1 – Company Name: Enter the name for *each kind of software* as it appears on the CASS™/MASS™ certificate.
A1.2, 1.5, 1.8, & A2.2 – Software Name and Version: Enter name and version for *each kind of software* as it appears on the CASS/MASS certificate.
A1.3, 1.6, 1.9, & A2.3 – Configuration: Enter the specific software configuration parameter settings as it appears on the CASS/MASS certificate.
A2.4 – MLOCR: Enter the MLOCR Serial Number as it appears on the MASS Certificate.

NOTE: If information entered in this section represents the list processing of more than one certified company, attach a list of company names, software names and versions, as well as the configuration to code the address information used in the mailing.

B. List

1. List Processor's Name: Enter the company name that coded the address list(s) and/or performed ZIP + 4®/DPV® confirmation using CASS Certified™software. Attach a list if additional space is required.
2. Date List Processed: Enter the processing date for each list. If multiple lists, enter the oldest date from the list.
3. Date of Database Product Used: Enter the version date of each database package used for processing. If multiple lists, enter the oldest version date from the lists.
4. List Name or ID No.: Print the name or identification number of the address list. If more than one list is used, leave blank. If the identification number is used, the number MUST be preceded by "ID#".
5. Number of Lists: Enter the number of lists used to produce the mailing.
6. Total Records Submitted for Processing: Enter the total number of address records *(from all lists in item B5)* submitted at the time the list(s) was coded.

C. Output

1. Total Coded: Enter the total number coded.
2. Validation Period: Enter the effective dates as shown below:

Product Name	From Date	To Date
ZIP + 4/DPV Confirmed	30 days before *(the 15th of each month or bi- monthly)* or no later than 105 days after the file date.	180 days after the ZIP + 4 valid "From" date.
DirectDPV™	30 days before *(the 15th of each month or bimonthly)* or no later than 105 days after the ZIP + 4 product file date.	180 days after the DirectDPV/ZIP + 4 valid "From" date.
Five-Digit Coded	30 days before *(the 15th of each month or bimonthly)* or no later than 105 days after the ZIP + 4, Five-digit ZIP, or the Carrier Route product date.	365 days after the Five-Digit Valid "From" date.
Total Carrier Route Coded	30 days before or up to 105 days after the ZIP + 4, Five-Digit ZIP™, or the Carrier Route product date *(the 15th of each month or bimonthly)* or up to 105 days after the file date.	90 days after the Carrier Route Valid "From" date.
eLOT® Sequence No. Assigned	30 days before or up to 105 days after the eLOT file product date *(the 15th of each month or bimonthly)*.	90 days after the eLOT valid "From" date.

D. Mailer

1. Signature: Signature of individual who processed the list, or the mailer's representative.
2. Date Signed: Enter the date this form is signed.
3. Name & Address of Mailer: Enter the name and address of the individual whose signature appears in item D1.

E. Qualitative Statistical Summary (QSS)

This information allows mailers and list processors to evaluate the quality of their address list processed through CASS software before its contents enter the mailstream. A significant number of Highrise default/rural route default matches, although these addresses remain eligible for postal automation rate discounts at this time, increase the costs and reduce the efficient delivery of this mail. Mailer's should research to obtain secondary unit designator address information or highrise addresses and specific box number information for rural route addresses which are coded to default records on the National ZIP + 4 File.

Highrise Default/RR Default

Entries in this box show the number of addresses that were default matched. Defaults are matches made to addresses that contain invalid/missing secondary address or box information. A highrise default contains the building street address in the primary range field and spaces in the secondary range field. A rural route default contains the route number in the primary name but also has spaces in the primary address range.

LACSLink® System

Entries in this box show the number of addresses which have been converted through the LACSLink process. LACSLink is a data product provided by the Postal Service to allow addresses that have been converted due to USPS changes or for 911 emergency systems to be linked with their new address.

Early Warning System (EWS)

Entries in this box show the number of addresses on the processed address list that are new addresses not in the current U.S. Postal Service® ZIP + 4 File. These addresses are, however, valid addresses as formatted and should not be changed in any way since the U.S Postal Service will assign ZIP + 4's to these addresses on the next monthly ZIP + 4 File.

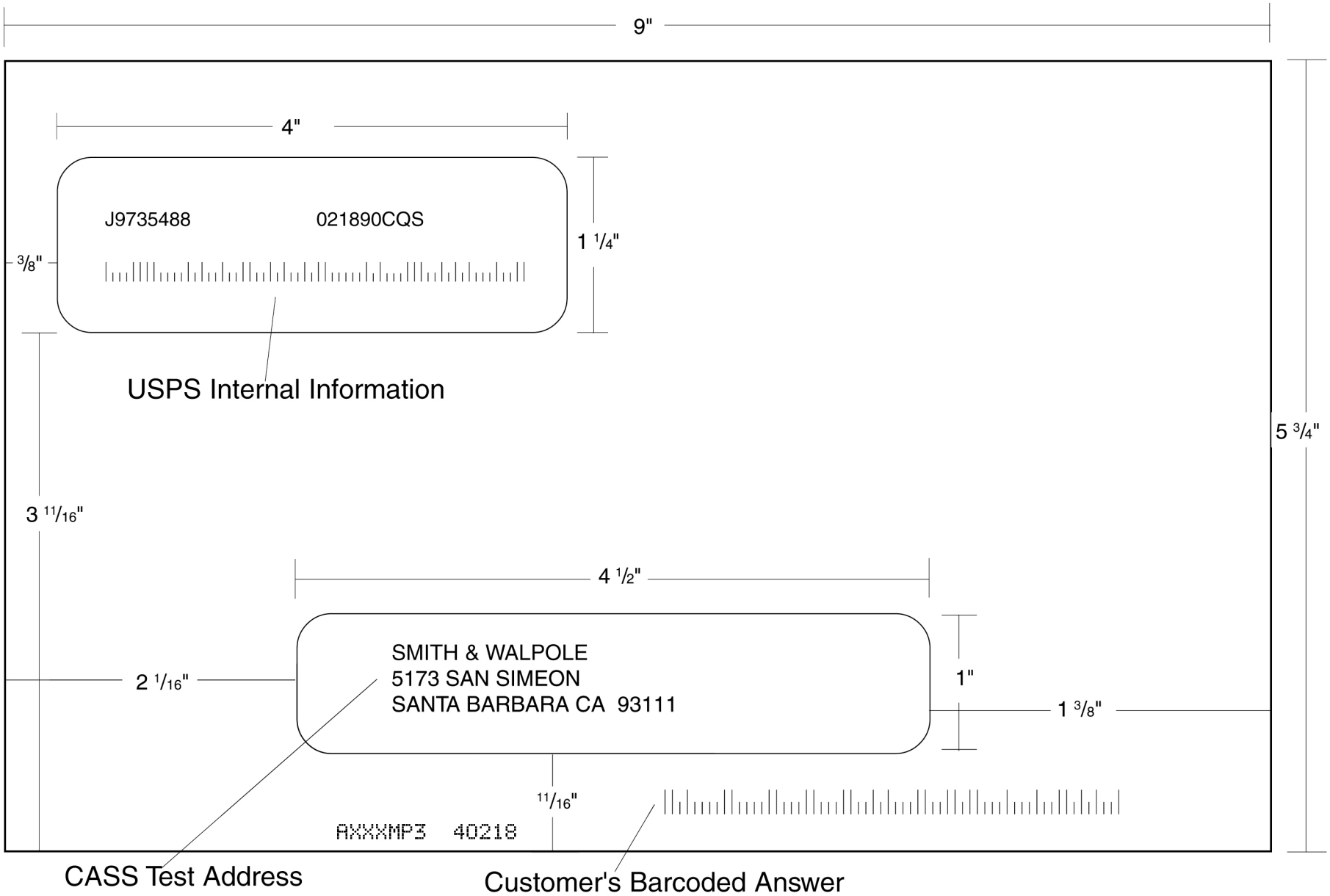
SuiteLink™ System

Entries in this box show the number of ZIP+4/DPV confirmed addresses that matched to a highrise default, and the SuiteLink process returned the appropriate suite number. Only SuiteLink enabled software will return a value in this box *(Check with your software vendor for obtaining this option)*. These address records are valid delivery points by the U.S. Postal Service. Addresses that are not confirmed by DPV are either new addresses not available on the current Delivery Sequence File, or are not valid and the list holder should further investigate to determine the accuracy of these addresses. Mailers should make every effort to ensure the quality of their address list(s).

Appendix 2:

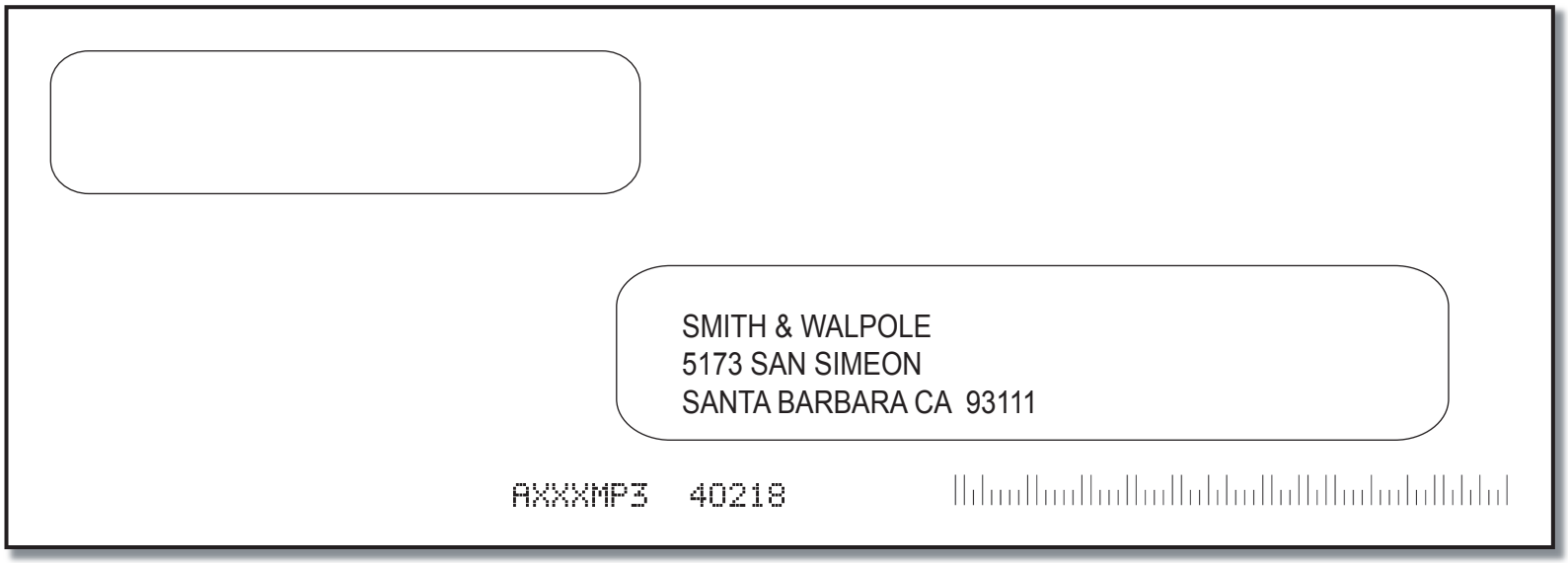
Test Mailpiece Examples

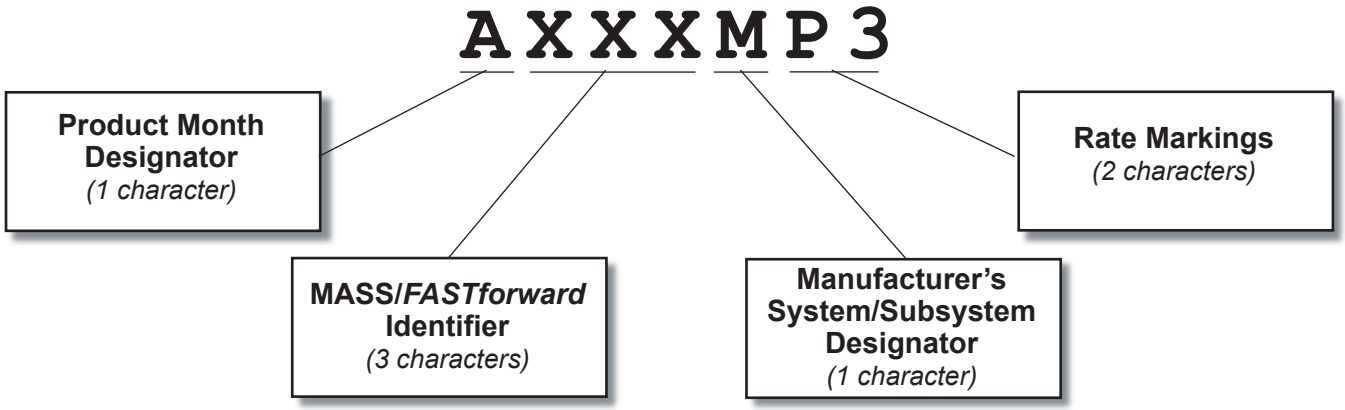
Test Mailpiece Example

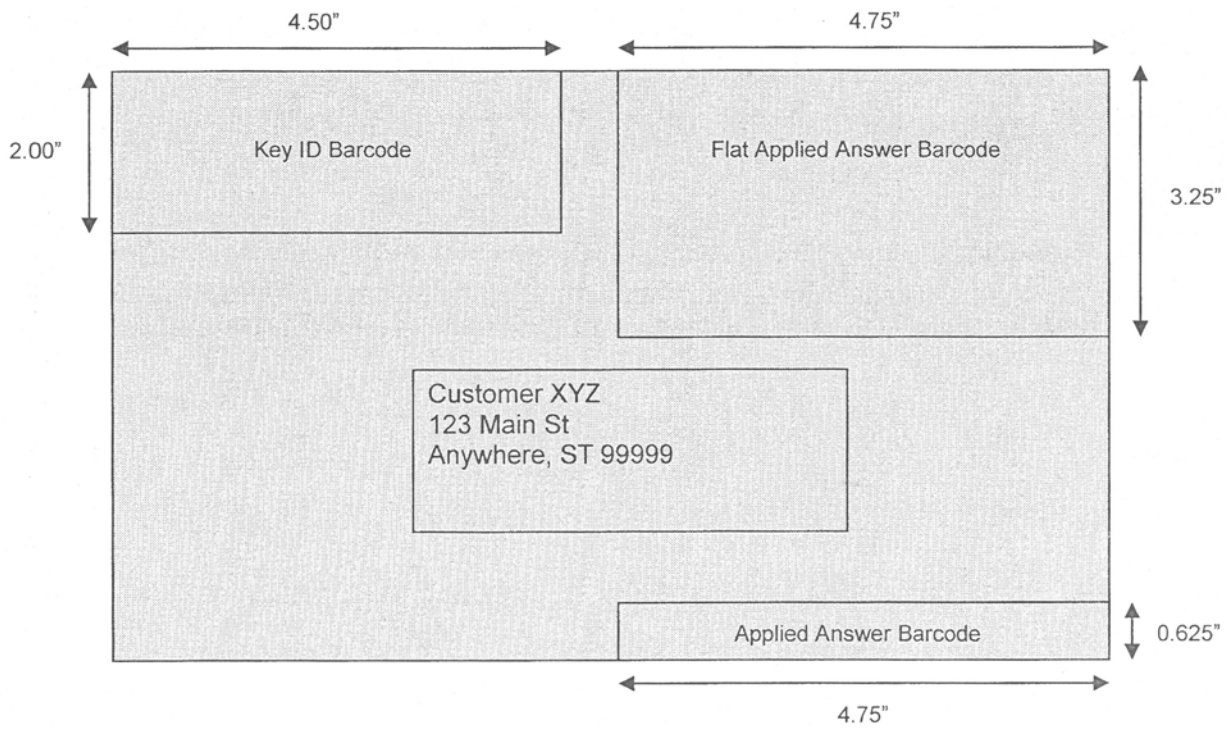


Identifier/Rate Code

The Identifier/Rate code consist of seven characters representing the product month, system identifier, manufacturer code and rate markings. All MASS™ certified equipment and systems must print the identifier together with the appropriate rate marking on each processed mailpiece bearing a ZIP + 4 Delivery Point Barcode. The *FASTforward*® platform Identifier is printed in place of the MASS Identifier for MASS certified systems *FASTforward* equipped and licensed. The MASS Identifier provides for an audit trail and combined with the *FASTforward* platform, the Identifier signifies whether the mailpiece has met Move Update requirements.







Read Zones

- The **USPS *Key ID Barcode*** read zone is referenced from the top left corner of the mailpiece.
- The ***Applied Answer Barcode*** read zone is referenced from the lower right corner of the mailpiece.
- The ***Flats Applied Answer Barcode*** read zone is referenced from the top right corner of the mailpiece.

Appendix 3:

Translation of Error Codes and Special Flags

A3 Customer No Match Record Translation of Error Codes and Special Flags

Error Codes

01	5-digit ZIP not match
02	ZIP+4 not match
03	Carrier ID not match
04	City name not match
05	State abbreviation not match
06	Out of range
07	Address is non-deliverable
08	Unique ZIP Code not finest level of code
09	LACS indicator
10	Perfect address
11	General standardization error
12	eLOT sequence
13	eLOT A/D code
14	RDI
15	Fatal Error
16	LACS^{Link} Indicator
17	LACS^{Link} Return Code
18	Suite^{Link} Return Code
19	Incorrect delivery point barcode (Non-Fatal)
20	Incorrect delivery point barcode
21	PMB
22	Default flag error/Record type error
30	History
DO	Confirmation
DC	CMRA
DF	False-positive
DT	Delivery type
DN	No stats
DB	Business
DD	Drop
DK	Drop count
DW	Throwback
DS	Seasonal
DV	Vacant
DL	LACS
FT	Footnote Code Error

Record Type

S	Street
P	PO Box
R	Rural Route
H	Highrise
F	Firm
G	General Delivery

Standard Address with Elements

(Spelled out or Abbreviated)

AA	Firm Name - Abbreviation
AB	Firm Name - Noise words
AC	Firm Name - Address similar to firm name
AD	Firm Name - Swap firm name and Address field
AE	Normalized street name
AF	Street Name - Spelling variation
AG	Firm Name not present - Valid Z4 on input match to firm
A0	5-digit
A1	Dropped 5-digit
A4	5-digit with non-mailing name
A5	Dropped 5-digit with non-mailing name
A8	5digit misspelled city
* A9	Dropped 5-digit with misspelled city

Standard Address

(Includes Reversed Alphanumeric Primary/Secondary Numbers, Reversed Pre/Post Directionals, and Secondary Number Combined with Primary Number)

B0	5-digit
B1	Dropped 5-digit
* B2	5-digit with misspelled street
* B3	Dropped 5-digit with misspelled street
B4	5-digit with non-mailing name
B5	Dropped 5-digit with non-mailing name
* B6	5-digit with misspelled street and non-mailing name
* B7	Dropped 5-digit with misspelled street and non-mailing name
B8	5-digit with misspelled city
* B9	Dropped 5-digit with misspelled city
BE	Normalized street names

Standard Address with Post-Directional Dropped or Incorrect

CC	Post-directional changed to a non-cardinal directional - no match
C0	5-digit
C1	Dropped 5-digit
* C2	5-digit with misspelled street
* C3	Dropped 5-digit with misspelled street
C4	5-digit with non-mailing name
C5	Dropped 5-digit with non-mailing name
* C6	5-digit with misspelled street and non-mailing name
* C7	Dropped 5-digit with misspelled street and non-mailing name
C8	5-digit with misspelled city
* C9	Dropped 5-digit with misspelled city

* No answer will be bypassed
** Return input record (Unless using DPV to break the tie)
*** No grading for standardization
**** Normalization required

Standard Address with Pre-Directional Dropped or Incorrect

	DC	Pre-directional changed to a non-cardinal directional - no match
	D0	5-digit
	D1	Dropped 5-digit
*	D2	5-digit with misspelled street
*	D3	Dropped 5-digit with misspelled street
	D4	5-digit with non-mailing name
	D5	Dropped 5-digit with non-mailing name
*	D6	5-digit with misspelled street and non-mailing name
*	D7	Dropped 5-digit with misspelled street and non-mailing name
	D8	5-digit with misspelled city
*	D9	Dropped 5-digit with misspelled city

Standard Address with Suffix Dropped

	E0	5-digit
	E1	Dropped 5-digit
*	E2	5-digit with misspelled street
*	E3	Dropped 5-digit with misspelled street
	E4	5-digit with non-mailing name
	E5	Dropped 5-digit with non-mailing name
*	E6	5-digit with misspelled street and non-mailing name
*	E7	Dropped 5-digit w/misspelled street and non-mailing name
	E8	5-digit with misspelled city
*	E9	Dropped 5-digit with misspelled city

Dual Address

	F0	Street address
	F1	Box record
	F2	Dual Address on separate line
	F4	Street address with non-mailing name
	F8	Street address with misspelled city
	F9	Box record with misspelled city

Aliases

	G0	5-digit - Base
	G1	5-digit - Alias
	G2	Dropped 5-digit - Base
	G3	Dropped 5-digit - Alias
**	G4	5-digit - Out of range
	G5	30 char abbreviation alias

Alias/Mult Response

**	H0	5-digit - Base
**	H1	5-digit - Alias

Small Town Default

	I0	Exist in ZIP+4
**	I1	No match in ZIP+4 P&G records exist
**	I2	General Delivery match in ZIP+4/ G rec only - no match
**	I3	No match in ZIP+4/City State

Last Line

	JA	Input city/ZIP Code correspond; exact match in ZIP Code
	JB	Input city/ZIP Code correspond; Input City is non-mailing name, exact match in ZIP Code
	JC	Input city/ZIP Code don't correspond; inexact match in ZIP Code
	JD	Input city/ZIP Code don't correspond; inexact match in city
	JE	Input city equals 5-digit PLL, ZIP+4 PLL is different
	JI	Input city/ZIP Code don't correspond; best candidate is inexact match in finance number, but not in either City or ZIP Code. No Match.
	J0	5-digit
	J1	Dropped 5-digit
*	J2	5-digit with misspelled street
*	J3	Dropped 5-digit with misspelled street
	J4	5-digit with dropped component
	J5	Dropped 5-digit and component
*	J6	5-digit with dropped component and misspelled street
*	J7	Dropped 5-digit and component with misspelled street
	J8	5-digit with misspelled city
*	J9	Dropped 5-digit with misspelled city

Multiple Response

**	K0	5-digit
**	K1	Dropped 5-digit
**	K2	5-digit with misspelled street
**	K3	Dropped 5-digit with misspelled street
**	K4	5-digit with dropped or incorrect component
**	K5	Dropped 5-digit and/or incorrect component
**	K6	5-digit with dropped/incorrect component and misspelled street
**	K7	Dropped 5-digit and/or incorrect component with misspelled street
**	K8	5-digit with misspelled city
**	K9	Dropped 5-digit with misspelled city

Inexact/Questionable Matching Logic

*	L0	5-digit
*	L1	Dropped 5-digit

* No answer will be bypassed
** Return input record (Unless using DPV to break the tie)
*** No grading for standardization
**** Normalization required

Key Elements Also Known As

****MA	Out of range - no match
M0	With 5-digit
M1	Dropped 5-digit
M8	5-digit with misspelled city
M9	Dropped 5-digit with misspelled city

*** NDF Position Error

N0	5-digit
N1	Dropped 5-digit

Extra Information

O0	5-digit
O1	Dropped 5-digit
O2	PMB on address line
O3	PMB on secondary address line
O4	Valid Secondary with '#' sign; exact match
O5	PMB number is a valid PO Box Number - no match
O6	Invalid secondary with '#' sign; default match
O7	Double '#' signs at the end of address line – invalid
O8	Double '#' signs at the end of address line, one valid value, one invalid value

Syndrome

P0	Seattle Syndrome wtih 5-digit on Input
P1	Seattle Syndrome with Dropped 5-digit on Input
*** P2	Salt Lake Syndrome with 5-digit on Input
*** P3	Salt Lake Syndrome with Dropped 5-digit on Input
P4	Flushing NY Syndrome with 5-digit on Input
P5	Flushing NY Syndrome dropped 5-digit on Input

ZIP Correction

R0	Incorrect 5-digit within finance no.
R1	Invalid 5-digit
R2	Incorrect 5-digit within finance no. and incorrect +4
R4	Incorrect 5-digit within finance no. and blank city/state
R5	Incorrect 5-digit not within finance no.

Highrise Default or Delivery Point Alternate

S0	With 5-digit
S4	With 5-digit highrise
S5	"Chase the Base" – Delivery point alternate on input, return highrise exact
** S6	With 5-digit highrise multiple

Hyphenated Ranges

T1	Numeric alpha no match to numeric/numeric alpha exists
T2	Alphanumeric/numeric alpha-transpose to make match
T3	Delete hyphen
T4	Add hyphen
T5	Secy alphanumeric insert hyphen and transpose – default
T6	Add alpha to match to numeric range only
** T7	Add double alphas and validate no match to numeric
** T8	Transpose alpha to beginning/no match to numeric range
TA	Recombine hyphenated trailing primary alpha with secondary number
TB	Recombine non-hyphenated trailing primary alpha with secondary number
TC	Recombine hyphenated trailing primary numeric with secondary number
TD	Recombine hyphenated trailing alphanumeric/ numeric alpha with secondary number
TE	Recombine secondary values into one; exact match only

APO / FPO

UA	Bad org info in address line without ZIP Code
UB	Out of range records for PSC box numbers
U0	Clean military addresses with 5-digit
U1	Reversed box/PSC number with ZIP Code
U2	Reversed box/PSC number without ZIP Code
U3	Good address/ZIP Code with invalid city name
*** U4	PSC box turned into PO Box with ZIP Code
** U5	Missing PSC, CMR, unit number with good box number
U6	Good military address with invalid ZIP Code
U7	Bad org info in Firm Name field with good ZIP Code
U8	Bad org info in Firm Name field without ZIP Code
U9	Bad org info in address line with ZIP Code

Delivery Address Line

** V0	Contains firm name
** V1	Contains highrise name

Multiple Finance Number Matching

** W0	Multiple response within finance no. - dropped 5-digit
W1	Single response within finance no.- dropped 5-digit
W2	Altered street name
W3	No correlation between city & ZIP-Match in ZIP
** W4	City and ZIP Code from different finance numbers
W5	City and State does not agree with ZIP Code
W6	City and ZIP Code agree, state from different finance

* No answer will be bypassed
** Return input record (Unless using DPV to break the tie)
*** No grading for standardization
**** Normalization required

Highrise

	X0	With a firm suite number
*	X2	With misspelled street
	X8	With a firm suite number and misspelled city

Split/Combined Elements

	Y0	Combine pre-directional with street name
	Y1	Split pre-directional words off street name
	Y2	Split suffix words off street name
	Y3	Drop suffix words off multi-word street names
	Y4	Combine suffix with street name
	Y5	Shift street name to pre-directional suffix to street name
**	Y6	Invalid street name
*	Y7	Street name spelling variations

ZIPMove

	Z0	Valid match in new finance number/Match.
	Z1	Invalid match in ZIPMove/No Match.
	Z2	Valid ZIPMove match; invalid in new finance number/No Match.

Out of Range/Overlapping

**	10	Bad PO Box for finance no./ZIP
	11	Overlapping PO Box ranges/return lowest ZIP + 4
**	15	Bad rural route for finance no./ZIP
**	20	Invalid primary number
	21	Invalid secondary number
	22	"EWS" No match; Input is exact match to EWS record
	23	LACS^{Link}
**	24	LACS^{Link} no match
	25	Suite^{Link} (optional category)
	26	Suite^{Link} no match (optional category)

Unique ZIP Codes

	4A	Valid city and ZIP Code
	4B	Valid city and ZIP Code with valid add-on (match)
	4C	Valid city and ZIP Code - default match
	4D	Unique input ZIP - exact match to non-unique if exact match not available in unique
	4E	No correlation between city and ZIP Code; match to city
**	4F	No correlation between city and ZIP Code (no match; delete ZIP Code)
	4G	Input address line taken from unique ZIP + 4 record, match into non-unique
	4H	No input ZIP - can make exact match to unique (firm name not required)
	4I	Valid city and ZIP COde with invalid add-on (retain ZIP + 4)

Puerto Rico

**	5A	Missing noise URB - end address/multiple with valid or invalid URB
	5B	Drop or abbreviate leading suffix
	5C	Alpha or numeric - end address
	5D	Numeric house number - end address preceded by "#," "No.," or "Num"
	5E	Alphanumeric house number - end address preceded by "Blq"
	5F	Alphanumeric house number - begin/end address space alphanumeric
	5G	Alphanumeric house number - begin/end address hyphen alphanumeric
	5H	Hyphen house number/"Blq" and "Casa," "Blq" and "#"
**	5J	Address contains standalone word "Buzon" (no normalization)
	5K	No URB input - Match to address with blank URB
	51	No URB input - single response
**	52	No URB input - multiple response
	53	Valid URB on input - single response with valid/invalid URB
**	54	Valid URB on input - multiple response with valid/invalid URB
	55	Missing noise URB - single response with valid/invalid URB
**	56	Missing noise URB-multiple response with valid/invalid URB
	57	Valid URB end address-single response with valid or invalid URB
**	58	Valid URB end address - multiple response with valid or invalid URB
	59	Missing URB noise end address - single valid/invalid URB

Magnet Streets With Multiple Parse Variations

**	6E	Parsed street name or ZIP+4 street name contains directional or suffix
	6F	Variation in directional or suffix presentation
	6G	Suffix or directional dropped
	6H	Street name incorrectly split into multiple words
	6K	Trailing numeric/alpha value following a valid suffix

Multiple Address Lines and Perfect Addresses

	7A	Address line split between two lines
	70	Perfect address
	7B	Multiple field addresses with split-indicia

* No answer will be bypassed
** Return input record (Unless using DPV to break the tie)
*** No grading for standardization
**** Normalization required

Appendix 4:

Sample MASS Certificate

MASS™ Quality Certification

for

ZIP + 4® Delivery Point Code Matching Software

System Certification

MLOCR MAILER/USER

TEST SAMPLE

COURTESY TEST

Serial Number(s):

123-123456

Configuration:

ABC

This certificate is valid from O2/2009 to 07/31/2010

UNITED STATES POSTAL SERVICE®

Alice VanHorder

Manager, Address Management

Appendix 5:

Sample Customer No Match Report

Customer No Match Report Reference Numbers

The reference numbers below provides a brief description of fields on the CASS Customer No Match Report located on the next page.

1. **CASS Record Given** is the address as it appeared on the mailpiece.
2. **CASS Key** uniquely identifies each test record on the mailpiece.
3. Pre-**Barcode** indicates if address is prebarcoded in the address block of the mailpiece.
   Y = Yes,
   N = No,
   * = customer sprayed pre-barcoded as customer answer
4. **Z9** indicates the presence of an invalid ZIP + 4 Code on the mailpiece.
   Y = Yes, N = No
5. **CASS Standardization Answer** is the expected return answer on the mailpiece.
6. **Special Flag** identifies the type of test address given.
7. **Customer Record Return** is the customer's answer with ZIP + 4 and barcode. IM Barcode tracking information: Barcode ID, Service Code, Mailer ID, Serial Number.
8. **#** indicates fatal ZIP + 4 add-on error (i.e., '0000'/'9999')
   ***** indicates delivery point error.
9. '**Y**' indicates misread/miscoded error for character recognition in street address information.
10. **ZIP + 4 Odd/Even/Both** indicates the ZIP + 4 range. 'Y' in this field indicates that the ZIP + 4 code has had transaction in the past 12 months as identifed by Z4CHANGE.
    O = Odd
    E = Even
    B = Both
    Y = Z4CHANGE

CUSTOMER NAME: USPS
FASTFORW CUST:

CUSTOMER ID: 00421OMAY
SERIAL: 1234567
ID ASSIGNED: XXX
ID RETURNED: XXX
IM BARCODE: YES

GRADING STATISTICS		COUNT	
INITIAL TOTAL CASS RECORDS		2,000	
AVAILABLE FOR GRADING		1,992 (FF= 0)	
RECS BYPASSED		78 (FF= 0 / OLD= 0)	
Z4CHANGE/NON-DELIVERABLE	71		
MANUAL OVERRIDES	0		
REJECT < 7.5 %	6		
NO BARCODE SPRAYED	6		
ONLY CORRECT 5DIGIT SPRAYED	0		
BARCODE UNREADABLE (UNRD) < 2.5 %	1		
NO PLUS4 ON MAIL PIECE	0		
TOTAL RECORDS AVAILABLE FOR GRADING		1,914	100.00%
CORRECTLY CODED RECORDS		1,908 (FF= 0)	99.69%
PENALTY FOR MISREAD/MISCODE ERRORS	0 X .5	000000	
PENALTY DEFAULT (KEYING) DEPTH/CODE ERR	0	0	
CORRECTLY CODED ADJUSTED FOR PENALTIES		0000000000	000000%
BONUS POINTS AWARDED (NOT ENOUGH BONUS QUESTIONS CORRECT)			0.00%
TOTAL RECORDS COUNTED INCORRECT		6.00	0.31%
INCORRECTLY CODED RECORDS	6		
BARCODE UNREADABLE (UNRD) > 2.5 %	0		
REJECTS > 7.5% COUNTED INCORRECT	0		
PENALTY FOR MISREAD/MISCODE ERRORS	000000		
PENALTY DEFAULT (KEYING) DEPTH/CODE ERR	0		

****

INCORRECTLY CODED PERFECT ADDRESSES	0 (MAX= 3)	- CAN NOT EXCEED MAX
INCORRECTLY CODED FATAL ADDON	0	- NO FATAL ADDON
INCORRECTLY CODED DPBC	0 (MAX= 9)	- CAN NOT EXCEED MAX

****

FINAL SCORE (MINIMUM 98.5%): 99.69%

****

USPS 47-2467 U.S. POSTAL SERVICE - CODING ACCURACY SUPPORT SYSTEM DATE: 04/01/2008
NATIONAL CUSTOMER SUPPORT CENTER TIME: 20:40 14
REPORT CII033P1 CUSTOMER STATISTICS PAGE: 1

CUSTOMER NAME USPS
FASTFORW CUST.

CUSTOMER ID: 004210MAY
SERIAL. 12345678
ID ASSIGNED. XXX
ID RETURNED: XXX
IM BARCODE: YES

STATISTICAL OVERVIEW	COUNT
INITIAL TOTAL CASS RECORDS	350
RECORDS AVAILABLE FOR GRADING	348
RECORDS CODED CORRECTLY	348
TOTAL RECORDS COUNTED INCORRECT	0

****

TRACKING BARCODE FINAL SCORE (MINIMUM 100%) 100%

****

** BARCODE ID MUST EQUAL 00
** SERVICE CODE MUST EQUAL 700
** MAILER ID/SERIAL NUMBER OPTIONS
OPTION 1: MAILER ID MUST BE 666666
SERIAL NUMBER MUST BE 9 DIGITS THAT ARE THE SAME OR UNIQUE, BUT NOT ALL ZEROS
OPTION 2 MAILER ID MUST BE 999999999
SERIAL NUMBER MUST BE 6 DIGITS THAT ARE THE SAME OR UNIQUE, BUT NOT ALL ZEROS
OPTION 3. USE ASSIGNED MAILER ID. IF MAILER ID IS 6 DIGITS, SERIAL NUMBER MUST BE 9 DIGITS AND VICE VERSA

Appendix 6:

Customer Statistics

USPS 47-2467

REPORT CII030P2

US POSTAL SERVICE - CODING ACCURACY SUPPORT SYSTEM
NATIONAL CUSTOMER SUPPORT CENTER
CUSTOMER NO MATCH REPORT
ADDRESSES WHICH ARE GRADED AND SCORED

DATE: 11/07/2005
TIME: 20525146
PAGE: 15

CUSTOMER NAME: USPS

CUSTOMER ID: 000040DCF

CASS RECORD GIVEN					CASS STANDARDIZATION ANSWER				CUSTOMER RECORD RETURNED		
JAMES B RYAN INC (1) 600 N 30TH ST # 3924 # 1117 CAMDEN NJ 08105 (2)					JAMES B RYAN INC (5) 600 N 30TH ST # 3924 # 1117 CAMDEN NJ 08105-1363 99 (6) (10)				UNREA-DABL E		
CASS KEY B9806679	SIZE C	BARCODE N	Z9 N	CASE MIXED	FONT D	SPECIAL FLAG 07	RECORD TYPE H	ZIP+4 ODD/EVEN/BOTH Y		RECORD TYPE	ZIP+4 ODD/EVEN/BOTH
INDIA GARMENTS 404 HACKENSACK ST # 2F # 3643 CARLSTADT NJ 07072 (3)					INDIA GARMENTS 404 HACKENSACK ST APT 2F # 3643 CARLSTADT NJ 07072-1313 26				REJ		
CASS KEY B9806779	SIZE C	BARCODE N	Z9 N	CASE MIXED	FONT D	SPECIAL FLAG 08	RECORD TYPE H	ZIP+4 ODD/EVEN/BOTH E		RECORD TYPE	ZIP+4 ODD/EVEN/BOTH
RADEY AND FULLER ASSOC 905 KINGS HWY N # 9788 # 1 CHERRY HILL NJ 08034 (4)					RADEY AND FULLER ASSOC 905 KINGS HWY N STE 1 # 9788 CHERRY HILL NJ 08034-1536 01				(8) 08034-1536 99*		
CASS KEY B9806780	SIZE A	BARCODE N	Z9 N	CASE UPPER	FONT A	SPECIAL FLAG 08	RECORD TYPE H	ZIP+4 ODD/EVEN/BOTH O		RECORD TYPE	ZIP+4 ODD/EVEN/BOTH
DOBBS ANNEX GENERAL DELIVERY ROCKWALL TX 75032					DOBBS ANNEX GENERAL DELIVERY ROCKWALL TX 75087-9999 99				- GENERAL DELIVERY (8) 75938-9999 99#		
CASS KEY B9806877	SIZE C	BARCODE N	Z9 N	CASE MIXED	FONT B	SPECIAL FLAG R0	RECORD TYPE G	ZIP+4 ODD/EVEN/BOTH B		RECORD TYPE G	ZIP+4 ODD/EVEN/BOTH
JUNGLE FOWL VACATIONS HC 69 BOX 206 GRADY OK 73561-4598					JUNGLE FOWL VACATIONS HC 69 BOX 206 GRADY OK 73569-9601 06				- HC 69 (7) 73561-9801 06		
CASS KEY B9806940	SIZE A	BARCODE N	Z9 N	CASE UPPER	FONT A	SPECIAL FLAG R2	RECORD TYPE R	ZIP+4 ODD/EVEN/BOTH B	Y (9)	RECORD TYPE R	ZIP+4 ODD/EVEN/BOTH

CIR031 MAR 2000

FONT A SIZE A: ABCDE FONT B SIZE A: ABCDE FONT C SIZE A: ABCDE FONT D SIZE A: ABCDE

FONT B SIZE C: ABCDE FONT C SIZE C: ABCDE FONT D SIZE C: ABCDE

USPS 47-2467

REPORT CII030P2

US POSTAL SERVICE - CODING ACCURACY SUPPORT SYSTEM
NATIONAL CUSTOMER SUPPORT CENTER
CUSTOMER NO MATCH REPORT
ADDRESSES WHICH ARE GRADED AND SCORED

DATE: 07/16/2008
TIME: 20142477
PAGE: 1

CUSTOMER NAME: USPS

CUSTOMER ID: 004210TAA

CASS RECORD GIVEN	CASS STANDARDIZATION ANSWER	CUSTOMER RECORD RETURNED
MARSH & MCLENNDEN (1) 356 FIRST STREET APARTMENT 3 HOBOKEN NJ 07030 (2)	BARCODE ID : 00 (5) SERVICE CODE: 700 MAILER ID: UNACCEPTED SERIAL NUMBER: UNACCEPTED (6)	BARCODE ID : 00 (7) SERVICE COOE: 000 ** MAILER ID: 000000000 ** NOT ALLOWED SERIAL NUMBER: 000000000 ** NOT ALLOWED

CASS KEY	SIZE	BARCODE	Z9	CASE	FONT	SPECIAL FLAG	RECORD TYPE	ZIP+4 ODD/EVEN		RECORD TYPE	ZIP+4 ODD/EVEN
00077						A0					

CASS RECORD GIVEN	CASS STANDARDIZATION ANSWER	CUSTOMER RECORD RETURNED
MARSH & MCLENNDEN 839 WILLOW AVENUE APARTMENT 2 HOBOKEN NJ 07030	BARCODE ID : 00 SERVICE CODE: 700 MAILER ID: UNACCEPTED SERIAL NUMBER: UNACCEPTED	BARCODE ID : 00 SERVICE CODE: 000 ** MAILER ID: 000000000 ** NOT ALLOWED SERIAL NUMBER: 000000000 ** NOT ALLOWED

CASS KEY	SIZE	BARCODE	Z9	CASE	FONT	SPECIAL FLAG	RECORD TYPE	ZIP+4 ODD/EVEN		RECORD TYPE	ZIP+4 ODD/EVEN
00104						A0					

CASS RECORD GIVEN	CASS STANDARDIZATION ANSWER	CUSTOMER RECORD RETURNED
THOMAS WILSON 901 NE MESA ST OLATHE KS 66061	BARCODE ID : 00 SERVICE CODE: 700 MAILER ID: UNACCEPTED SERIAL NUMBER: UNACCEPTED	BARCODE ID : 00 SERVICE CODE: 000 ** MAILER ID: 000000000 ** NOT ALLOWED SERIAL NUMBER: 000000000 ** NOT ALLOWED

CASS KEY	SIZE	BARCODE	Z9	CASE	FONT	SPECIAL FLAG	RECORD TYPE	ZIP+4 ODD/EVEN		RECORD TYPE	ZIP+4 ODD/EVEN
03342						D0					

CASS RECORD GIVEN	CASS STANDARDIZATION ANSWER	CUSTOMER RECORD RETURNED
WOODCREEK CONDOS 29652 MIDDLEBELT RD UNIT 1401F FARMINGTON HILLS MI 48334	BARCODE ID : 00 SERVICE CODE: 700 MAILER ID: UNACCEPTED SERIAL NUMBER: UNACCEPTED	BARCODE ID : 00 SERVICE CODE: 000 ** MAILER ID: 000000000 ** NOT ALLOWED SERIAL NUMBER: 000000000 ** NOT ALLOWED

CASS KEY	SIZE	BARCODE	Z9	CASE	FONT	SPECIAL FLAG	RECORD TYPE	ZIP+4 ODD/EVEN		RECORD TYPE	ZIP+4 ODD/EVEN
07793						T6					

CASS RECORD GIVEN	CASS STANDARDIZATION ANSWER	CUSTOMER RECORD RETURNED

CASS KEY	SIZE	BARCODE	Z9	CASE	FONT	SPECIAL FLAG	RECORD TYPE	ZIP+4 ODD/EVEN		RECORD TYPE	ZIP+4 ODD/EVEN

CIM031 MAR 2000

FONT A SIZE A: ABCDE FONT B SIZE A: ABCDE FONT C SIZE A. ABCDE FONT D SIZE A: ABCDE

FONT B SIZE C: ABCDE FONT C SIZE C: ABCDE FONT D SIZE C: ABCDE

Appendix 7:

Electronic Data File Description

Electronic Data File Description

The electronic error report for MASS is shown below in COBOL copybook format. The first seven lines are HEADER information.

Header Information:

```
****************************************
USPS 47-2467

REPORT CII030P2
CUSTOMER NAME:   ABC COMPANY
CUSTOMER ID:     05123OAAG
****************************************
```

Header Record:

```
01  CII030P2-REPORT-HEADER.
    05  P2-LINE-1.
        10  FILLER                  PIC X(300) VALUE ALL '*'.
    05  P2-LINE2.
        10 FILLER                   PIC X(05) VALUE SPACES.
        10 FILLER                   PIC X(12) VALUE 'USPS 47-2467'.
        10 FILLER                   PIC X(73) VALUE SPACES.
        10 FILLER                   PIC X(50) VALUE
        'US POSTAL SERVICE - CODING ACCURACY SUPPORT SYSTEM'.
        10 FILLER                   PIC X(71) VALUE SPACES.
        10 FILLER                   PIC X(06) VALUE 'DATE'.
        10 CII030P2-MM              PIC X(02).
        10 FILLER                   PIC X(01) VALUE '/'.
        10 CII030P2-DD              PIC X(02).
        10 FILLER                   PIC X(01) VALUE '/'.
        10 CII030P2-CC              PIC X(02).
        10 CII030P2-YY              PIC X(02).
        10 FILLER                   PIC X(08) VALUE SPACES.
    05  P2-LINE-3.
        10 FILLER                   PIC X(75) VALUE SPACES.
        10 FILLER                   PIC X(50) VALUE
        '    NATIONAL CUSTOMER SUPPORT CENTER     '.
        10 FILLER                   PIC X(71) VALUE SPACES.
        10 FILLER                   PIC X(06) VALUE 'TIME'.
        10 CII030P2-HH              PIC X(02).
        10 FILLER                   PIC X(01) VALUE ':'.
        10 CII030P2-MN              PIC X(02).
        10 FILLER                   PIC X(01) VALUE ':'.
        10 CII030P2-SS              PIC X(02).
        10 FILLER                   PIC X(01) VALUE SPACES.
    05  P2-LINE-4.
        10 FILLER                   PIC X(05) VALUE SPACES.
        10 FILLER                   PIC X(15) VALUE
        'REPORT CII030P2'.
        10 FILLER                   PIC X(70) VALUE SPACES.
        10 FILLER                   PIC X(50) VALUE
```

```
        ‘    ADDRESSES WHICH ARE GRADED AND SCORED     ‘.
        10 FILLER                    PIC X(95) VALUE SPACES.
    05  P2-LINE-5.
        10 FILLER                    PIC X(05) VALUE SPACES.
        10 FILLER                    PIC X(16) VALUE
        ‘CUSTOMER NAME: ‘.
        10 CII030P2-NAME                PIC X(40).
        10 FILLER                       PIC X(374) VALUE SPACES.
    05  P2-LINE-6.
        10 FILLER                       PIC X(05) VALUE SPACES.
        10 FILLER                       PIC X(16) VALUE
        ‘CUSTOMER ID: ‘.
        10 CII030P2-NUM                 PIC X(9).
```

Data Record:

Data records will start in record 8 and follow this format:

```
01  ERR-RPT2-WORK-RECD.
    05  ERR-RPT2-CARR-CNTL          PIC X(01).
    05  ERR-RPT2-CASS-KEY           PIC X(08).

*----- ORIGINAL INPUT FIELDS ---------------
    05  ERR-RPT2-IFIRST-FIRM        PIC X(40).
    05  ERR-RPT2-IZIP               PIC X(10).
    05  ERR-RPT2-ICITY              PIC X(28).
    05  ERR-RPT2-ISTATE             PIC X(02).
    05  ERR-RPT2-ISEC-URB-FIRM      PIC X(30).
    05  ERR-RPT2-IDELADDR           PIC X(64).

*----- STANDARDIZED POSTAL ANSWER FIELDS ---------------
    05  ERR-RPT2-SFIRST-FIRM        PIC X(40).
    05  ERR-RPT2-SSEC-URB-FIRM      PIC X(40).
    05  ERR-RPT2-SADDRESS           PIC X(64).
    05  ERR-RPT2-SCITY              PIC X(28).
    05  ERR-RPT2-SSTATE             PIC X(02).
    05  ERR-RPT2-SZIP               PIC X(05).
    05  ERR-RPT2-SHYPHEN            PIC X(01).
    05  ERR-RPT2-SADDON             PIC X(04).
    05  ERR-RPT2-SDELPT             PIC X(02).
    05  FILLER                      PIC X(01).

*----- MISCELLANEOUS REPORT FIELDS ---------------
    05  ERR-RPT2-MCONTROL.
        10 ERR-RPT2-MCNTL-SIZE              PIC X(02).
*           Size values:     A      C
        10 ERR-RPT2-MCNTL-BARCODE           PIC X(01).
*           Invalid BARCODE Present on mailpiece in WIDEAREA
*           Values:          Y      N
        10 ERR-RPT2-MCNTL-ZIP9              PIC X(01).
*           Invalid ZIP+4 Present on mailpieces:
```

```
*           Values:          Y     N
        10 ERR-RPT2-MCNTL-CASE            PIC X(05).
*           Case values:     Upper    Mixed
        10 ERR-RPT2-MCNTL-FONT            PIC X(01).
*           Font values:     A     B     C     D
    05  ERR-RPT2-MRECTYPE                 PIC X(01).
    05  ERR-RPT2-FILLER1                  PIC X(01).
    05  ERR-RPT2-MSPECIAL                 PIC X(02).
    05  ERR-RPT2-MODDEVEN                 PIC X(01).

*----- CUSTOMER RETURNED ANSWER ---------------
    05  ERR-RPT2-CZIP                     PIC X(05).
    05  ERR-RPT2-CHYPHEN                  PIC X(01).
    05  ERR-RPT2-CADDON                   PIC X(04).
    05  ERR-RPT2-CDPBC.
        10 ERR-RPT2-CDPBC-ANS             PIC X(02).
        10 ERR-RPT2-CDPBC-CHKDGT          PIC X(02).
    05  ERR-RPT2-FILLER2                  PIC X(12).

*----- DATA RELATING TO CUST RETURNED ZIP+4 ANSWER ---------------
*   This is the parsed information associated with the returned ZIP+4 from
*   the customer. It is taken from ZIP+4 information that may be different
*   from the customer's due to timing of the ZIP+4 data.
    05  ERR-RPT2-LINE1.
        10  ERR-RPT2-FIRM                 PIC X(50).
    05  ERR-RPT2-LINE2.
        10  ERR-RPT2-PRIMLO               PIC X(10).
        10  FILLER                        PIC X(03) VALUE ' - '.
        10  ERR-RPT2-PRIMHI               PIC X(10).
        10  FILLER                        PIC X(27).
    05  ERR-RPT2-LINE3.
        10  ERR-RPT2-PREDIR               PIC X(02).
        10  FILLER                        PIC X(01) VALUE SPACE.
        10  ERR-RPT2-STRNAME              PIC X(28).
        10  FILLER                        PIC X(01) VALUE SPACE.
        10  ERR-RPT2-SUFFIX               PIC X(04).
        10  FILLER                        PIC X(01) VALUE SPACE.
        10  ERR-RPT2-POSTDIR              PIC X(02).
        10  FILLER                        PIC X(11) VALUE SPACE.
    05  ERR-RPT2-LINE4.
        10  ERR-RPT2-SECUNIT              PIC X(04).
        10  FILLER                        PIC X(01).
        10  ERR-RPT2-SECLO                PIC X(08).
        10  FILLER                        PIC X(03) VALUE ' - '.
        10  ERR-RPT2-SECHI                PIC X(08).
        10  FILLER                        PIC X(26).
    05  ERR-RPT2-CRECTYPE                 PIC X(01).
    05  ERR-RPT2-CODDEVEN                 PIC X(01).
```